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Forest Planning Unit

Coal Unsuitability Study

October, 1980



Department of Agriculture
Forest Service
Fishlake National Forest

Department of The Interior
Bureau of Land Management
Richfield District



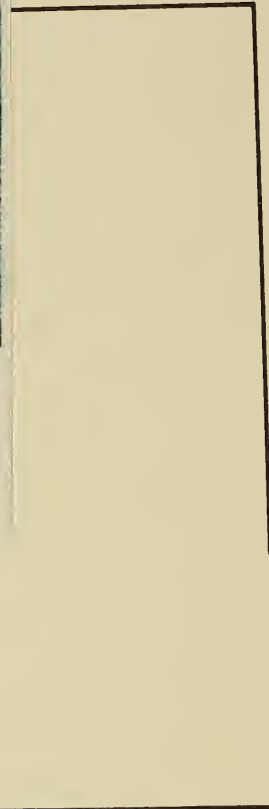
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**FOREST PLANNING UNIT
AREA LOCATION MAP**



As the Nation's principal conservation agencies, the Department of Interior and the Department of Agriculture have responsibility for most of our nationally owned lands and resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values found on public lands, and providing for the enjoyment of life through outdoor recreation.

The Departments assess our energy and mineral resources and work together to assure that their development is in the interest of all our people - now and for the future of America.

This brochure describes the results of our cooperative study in a portion of Sevier County regarding the area's suitability or unsuitability for coal mining. The study is part of a program to meet the nation's need for coal from federally managed lands and afford protection for the environment.

The Bureau of Land Management and the U.S. Forest Service are the two principal land management agencies within the area designated for study. By working together, we were able to more efficiently gather the necessary information and discuss problems with interested members of the public.

This cooperation led to what we feel are knowledgeable and accurate recommendations for this area's potential for future mining of coal. In making our recommendations, we have examined the existing environment and opportunities for resource uses, including minerals, timber, recreation, wildlife habitat, livestock grazing, watershed, and real estate actions. Conflicts between coal mining and other resource uses were evaluated through a federally required process.

We would like to thank the agencies, organizations, and individuals who provided time, data, and input throughout the study. We look forward to working with one another in the future to assure the best possible use of our federally managed lands.

Kent Taylor
Forest Supervisor
Fishlake National
Forest

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District Manager
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Management

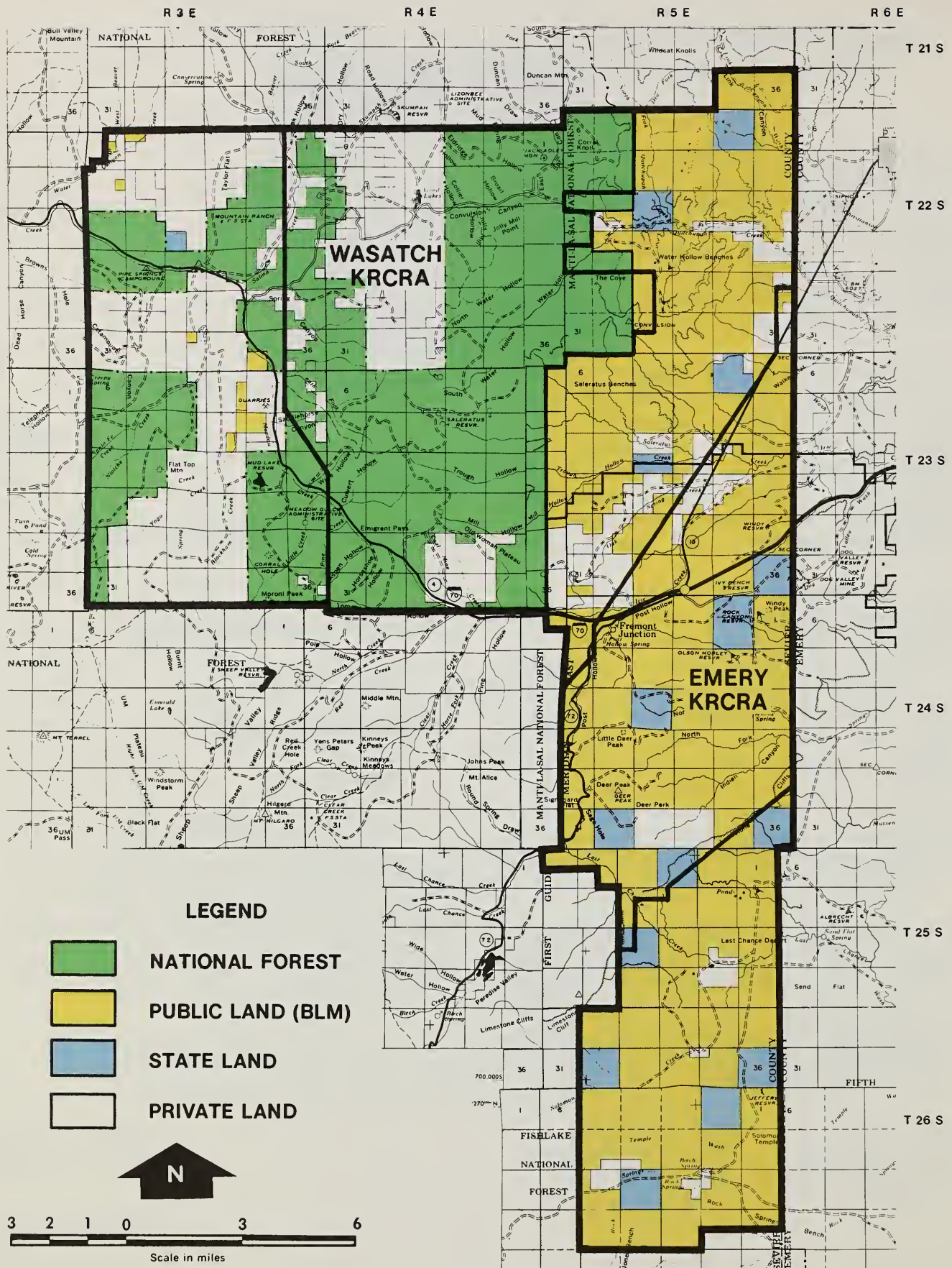
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LAND OWNERSHIP AND KNOWN RECOVERABLE COAL RESERVE AREA (KRCRA) BOUNDARY

MAP 1

INTRODUCTION

The United States Forest Service (USFS) and the Bureau of Land Management (BLM) are jointly implementing the requirements of the Federal lands review mandated by the Federal Land Policy and Management Act of 1976 (FLPMA) and the Surface Mining Control and Reclamation Act of 1977 (SMCRA). This began in late 1979 when the BLM and USFS began to update the minerals, watersheds, and wildlife portions of their respective planning documents. Later, in 1980, the 20 coal unsuitability criteria were applied to lands containing Federal coal reserves. Specific objectives of the planning effort include:

1. Update that portion of the Forest Planning Unit within the Wasatch Plateau and Emery Known Recoverable Coal Resource Areas (KRCRA).
2. Apply the unsuitability criteria to unleased Federal coal areas and existing leases not in production as of August 3, 1977 (date of passage of SMCRA). In the planning unit the criteria applies to the following lands:
 - a. 20,589.09 acres of Federal coal leases that were not in production on August 3, 1977;
 - b. 2,563.32 acres of outstanding Preference Right Lease Application (PRLA) lands;
 - c. 50,799.96 acres of unleased Federal coal lands that have been determined to have high, medium, or unknown development potential.
3. Include the unsuitability criteria and the other resource values within the planning documents of BLM and USFS.
4. Following the application of the unsuitability criteria, identify areas within the KRCRAs that would be acceptable for future coal lease consideration. This identification and consideration of other resource values will be utilized to delineate rank and select tracts.

The Forest Planning Unit lies within the eastern portion of Sevier County and consists of a well-defined area of BLM-administered public lands and a well-defined area of USFS lands. Scattered private and State lands are within the boundaries of the planning unit. Part of the planning unit is within the BLM Sevier River Resource Area and is administered by the Sevier River Area Manager in Richfield, Utah. Forest lands are administered by the Richfield District Ranger, Fishlake National Forest, Richfield, Utah.

The planning unit contains 187,998 acres, of which the BLM administers 76,522 acres and the USFS administers 57,780 acres. There are 44,310 acres of State land and 9,386 acres of private land within the planning unit. (Map 1 shows land ownership within the planning unit.)

The U.S. Geological Survey (USGS, 1980) has estimated the in-place coal resources in the Emery KRCRA to be 375 million tons. Recoverable Federal coal reserves in the Wasatch KRCRA were estimated to be 373 million tons (AAA Engineering, 1979). However, these figures represent only about 50 percent of the unleased acreage within the KRCRAs because of the lack of points of measurement from which to calculate resources. Based on AAA Engineering's figures and in-place

resource figures estimated by the USGS for leased Federal coal within the KRCRAs, it is estimated that there is an average of 13,350 tons of coal per acre.

The Forest Planning Unit is located along the western edge of the high plateaus section of the Colorado Plateau physiographic province. The planning unit includes parts of both the Wasatch Plateau and the Fish Lake Plateau and is characterized by very angular topography with deeply incised canyons, imposing escarpments, erosional benches and monuments developed on flat lying strata at high elevations. Elevations range from 6,000 to 9,000 feet.

The climate of the planning unit is semi-arid desert. Precipitation varies throughout the unit; average annual precipitation is estimated to be approximately 12 inches on the Saleratus Benches. However, mean precipitation at Rock Springs, about 13 miles south, during a 7-year period was 6.35 inches. At Emigrant Pass, Fishlake National Forest, mean precipitation at nearly 8,000 feet is estimated to be approximately 16 inches.

Temperature patterns within the planning unit vary with the diverse topography. Mean maximum July temperatures during a 30-year period (1931 to 1960) range from 70°F in the higher elevations to 84°F in the lower elevations. During the same time period, mean maximum January temperatures range from 28°F in the higher elevations to 36°F in the lower elevations (Forest Planning Unit, Unit Resource Analysis, 1976). The frost-free growing season at the higher elevations averages 40 days and 140 days at the lower elevations. Prevailing winds flow toward the east and average 11 miles per hour.

The air quality in the planning unit is clear and fairly uniform. The unit is within a single airshed, and there are no major emission sources other than dust and vehicle exhaust caused mainly by travel on I-70.

BLM-managed lands were originally part of the Richfield and Price Districts. Planning documents covering these lands were prepared by these offices from 1967 to 1975. In 1976, the Utah BLM reorganized and new District boundaries were established along county lines. The reorganization combined the Forest and part of the Robbers Roost and Last Chance Planning Units into one unit, the Forest Planning Unit. In 1976, the Forest Planning Unit documents, Unit Resource Analysis and Management Framework Plan were updated.

Forest Service lands were formerly administered by the Loa and the Salina Ranger Districts, and since 1973 have been managed by the Richfield Ranger District. The Salina Land Use Plan, which included that portion of USFS lands within the planning unit, was completed in 1976.

The analysis of the coal unsuitability criteria began with an interdisciplinary-interagency joint meeting between Richfield District BLM and Fishlake National Forest personnel on November 12, 1979. Resource inventories were updated where the KRCRAs are located. Each resource specialist from BLM and USFS, which included lands, minerals, forest products, range, water resources, fisheries, wildlife, and recreation, analyzed all elements of the criteria and other resource information to determine what impacts future coal leasing and development would have on the various resources.

APPLICATION OF THE COAL UNSUITABILITY CRITERIA TO COAL IN THE FOREST PLAN- NING UNIT

Each criterion as defined in the Federal Register 43 CFR 3461.1, effective July 19, 1979, is presented first followed by the interagency analysis. Exceptions are discussed where applicable.

Criterion No. 1:

All Federal lands included in the following land systems or categories shall be considered unsuitable: National Park System, National Wildlife Refuge System, National System of Trails, National Wilderness Preservation System, National Wild and Scenic Rivers System, National Recreation Areas, lands acquired with money derived from the Land and Water Conservation Fund, National Forests, and Federal lands in incorporated cities, towns, and villages. All Federal lands which are recommended for inclusion in any of the above systems or categories by the administration in legislative proposals submitted to the Congress or which are required by statute to be studied for inclusion in such systems or categories shall be considered unsuitable.

There are no National Park Systems, National Wildlife Refuge Systems, National Systems of Trails, National Wilderness Protection Systems, National Wild and Scenic Rivers Systems, National Recreation Areas, lands acquired with money derived from the Land and Water Conservation Fund or Federal lands in incorporated cities, towns, and villages within the KRCRA

boundaries (Forest Planning Unit, Unit Resource Analysis, 1976). However, a portion of Fishlake National Forest is included within the Wasatch KRCRA boundary, making this land unsuitable for future coal lease consideration.

Exceptions:

The Secretary of Agriculture has found no significant recreational, timber, economic, or other values within Fishlake National Forest which may be incompatible with a lease. Therefore, land within the Fishlake National Forest may be considered as suitable for future coal lease consideration pending assessment of all the criteria (Salina Land Use Plan, 1976).

Criterion No. 2:

Federal lands that are within rights-of-way or easements or within surface leases for residential, commercial, industrial, or other public purposes, or for agricultural crop production on Federally owned surface shall be considered unsuitable.

There are 12 rights-of-way or easements for powerlines, highways, and roads located in the KRCRA boundaries (BLM Master Title Plats). (Map 2 identifies these rights-of-way.) Combined, these rights-of-way total 36.8 miles (Table 1).

Land associated with these rights-of-way is considered unsuitable for future coal lease consideration.

Exceptions

Rights-of-way items 1 through 4 may be excepted and considered as suitable for future coal lease consideration provided that the following stipulations are attached to protect the

TABLE 1

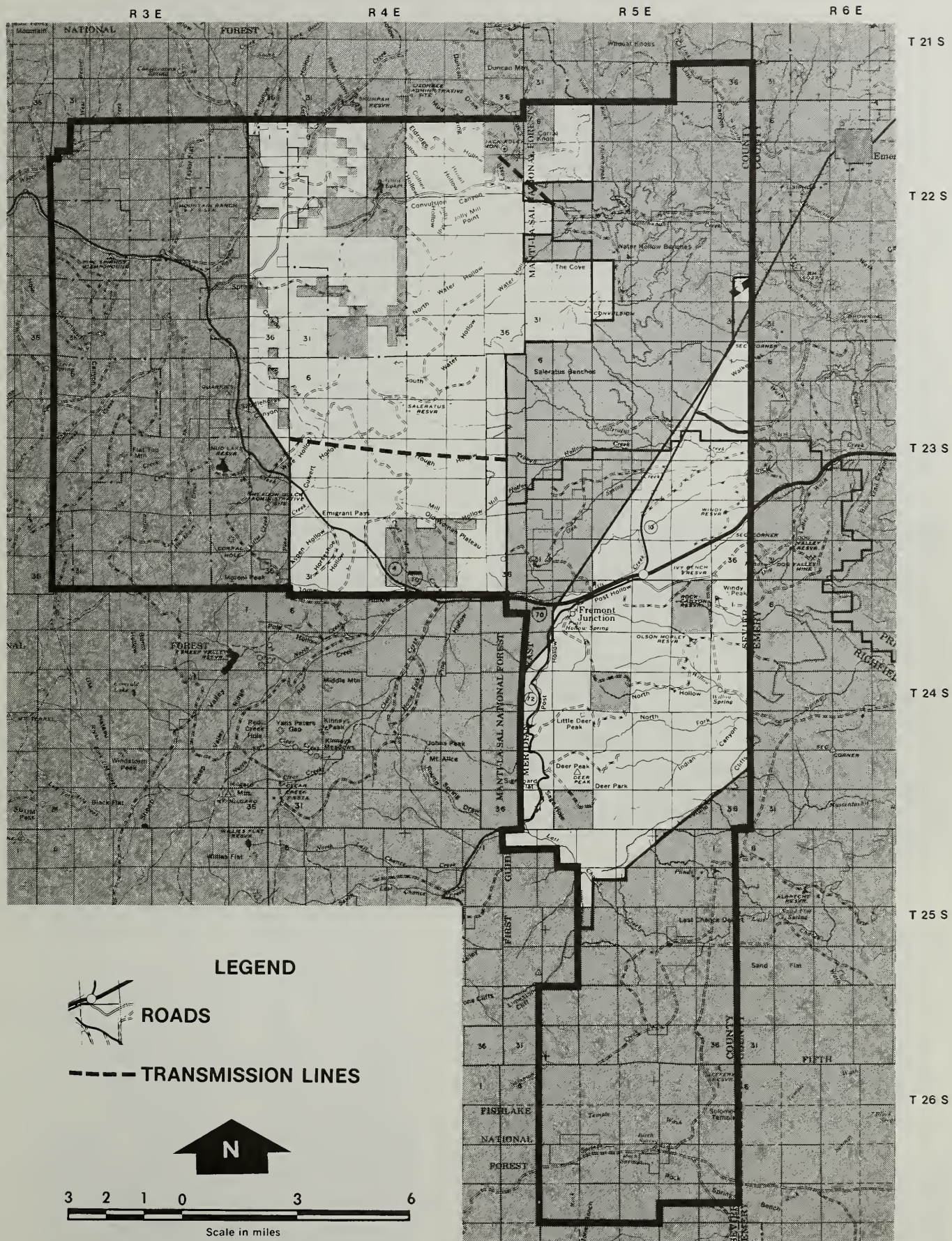
Rights-of-Way and Easements in Forest KRCRAs

Grantee	Serial No.	Type	Miles
1. Utah Power & Light	U4030	Powerline (69-kV)	1.9
2. Utah Power & Light	U36469	Powerline (345-kV)	4.8
3. Utah Power & Light	U22141	Powerline (345-kV)	4.8
4. Utah Power & Light	U38559	Powerline	7.8
5. Sevier County	U43522	Road R/W	1.4
6. Utah Dept. of Trans.	SL062677	Highway R/W	5.3
7. Utah Dept. of Trans.	SL062873	Highway R/W	1.3
8. U.S. Dept. of Trans.	U8966	Highway R/W	1.6
9. U.S. Dept. of Trans.	U0110883	Highway R/W	2.0
10. U.S. Dept. of Trans.	U19753	Highway R/W	2.5
11. U.S. Dept. of Trans.	U010063	Highway R/W	200 feet
12. Public Land Order	PL02354	Roadside Zone	3.4

rights-of-way: no fires, surface disturbance, nor subsidence would be allowed. Rights-of-way items 5 through 11 may be excepted and considered as suitable only for limited underground mining access corridors under the rights-of-way. The quantity of coal that can be mined by underground mining methods without causing surface subsidence is dependent upon a number of factors (e.g., amount and nature of the overburden, geologic structures, inherent coal strength, coal cleats and joints, type of mining, the amount of coal removed, etc.).

Without a knowledge and understanding of these factors, subsidence potential for a given area is a matter of speculation. Even given these unknowns, precise predictions cannot be made. However, certain guidelines can be established and would be used in formulating coal leasing and mining plan approvals along with stipulations to protect surface values. Following are examples of guidelines that would be considered:

1. Underground coal mining under areas to be protected would be restricted to "room and pillar" methods with limited removal of pillars depending on subsidence potential.
2. Pillar size and amount of coal to be removed would be determined during the mining process, based on conditions encountered.
3. An appropriate angle of draw as dictated by the site specific geologic and mining condition would determine the area of influence for maximum coal removal.
4. All critical areas would be monitored for subsidence during the life of the mine.



CRITERION 2 AND 3: RIGHTS OF WAY, EASEMENTS AND LEASES

MAP 2

Criterion No. 3:

Federal lands affected by section 522(e)(4) and (5) of the Surface Mining Control and Reclamation Act of 1977 shall be considered unsuitable. This includes lands within 100 feet of the outside line of the right-of-way of a public road or within 100 feet of a cemetery, or within 300 feet of any public building, school, church, community or institutional building or public park or within 300 feet of an occupied dwelling.

There are no known cemeteries, public buildings, schools, churches, community or institutional buildings, or public parks within the KRCRA boundaries (Forest Planning Unit, Unit Resource Analysis, 1976; Salina Land Use Plan, 1976). Table 1 shows the rights-of-way for public roads that are found within the KRCRA boundaries (Table 1, BLM Master Title Plats). Land within 100 feet of the outside line of the rights-of-way of the public roads is considered unsuitable for future coal leasing.

The Acord Lake Mountain Retreat subdivision is located within the Wasatch KRCRA boundary (BLM Master Title Plats). The Solicitor has determined that the summer homes located on the subdivision are not occupied dwellings (Nielson, 1980); therefore, these lands are considered suitable for future coal lease consideration. An abandoned station site and railroad right-of-way for the Denver and Rio Grande Railway Company are also found within the Wasatch KRCRA boundary. Land associated with these rights-of-way is considered as suitable.

Criterion No. 4:

Federal lands designated as wilderness study areas shall be considered unsuitable while under review by the Administration and the Congress for possible wilderness designation. For any Federal land which is to be leased or mined prior to completion of the wilderness inventory by the surface management agency, the environmental assessment or impact statement on the lease sale or mine plan shall consider whether the land possesses the characteristics of a wilderness study area. If the finding is affirmative, the land shall be considered unsuitable unless issuance of noncompetitive coal leases and mining on leases is authorized under the Wilderness Act and the Federal Land Policy and Management Act of 1976.

There are no proposed or designated wilderness study areas with the KRCRAs (BLM Wilderness Inventory, 1980; Forest Service RARE II, 1979).

Criterion No. 5:

Scenic Federal lands designated by visual resource management (VRM) analysis as Class I (an area of outstanding scenic quality or high visual sensitivity) but not currently on the National Register of Natural Landmarks shall be considered unsuitable. A lease may be issued if the surface management agency determines that surface coal mining operations will not significantly diminish or adversely affect the scenic quality of the designated area.

There are no lands listed as VRM Class I within the KRCRAs (Forest Planning Unit, Unit Resource Analysis, 1976; Salina Land Use Plan, 1976).

Criterion No. 6:

Federal lands under permit by the surface management agency and being used for scientific studies involving food or fiber production, natural resources, or technology demonstrations and experiments shall be considered unsuitable for the duration of the study, demonstration or experiment, except where mining could be conducted in such a way as to enhance or not jeopardize the purposes of the study, as determined by the surface management agency, or where the principal scientific user or agency gives written concurrence to all or certain methods of mining.

There are no lands within the KRCRAs that are being used for scientific studies involving food or fiber production, natural resource or technology demonstrations (Forest Planning Unit, Unit Resource Analysis, 1976; Salina Land Use Plan, 1976).

Criterion No. 7:

All districts, sites, buildings, structures, and objects of historic, architectural, archeological, or cultural significance on Federal lands which are included in or eligible for inclusion in the National Register of Historic Places, and an appropriate buffer zone around the outside boundary of the designated property (to protect the

inherent values of the property that makes it eligible for listing in the National Register) as determined by the surface management agency in consultation with the Advisory Council on Historic Preservation and the State Historic Preservation Office shall be considered unsuitable.

The Utah State Historical Society, Division of State History has identified the Trough Hollow Archaeological District as a proposed area of nomination for inclusion in the National Register of Historic Places (Smith, 1980) (see Map 3). Furthermore, a 0.5 mile corridor around the District is considered an appropriate buffer zone. These lands, totaling 8,910 acres, are considered unsuitable for future coal lease considerations.

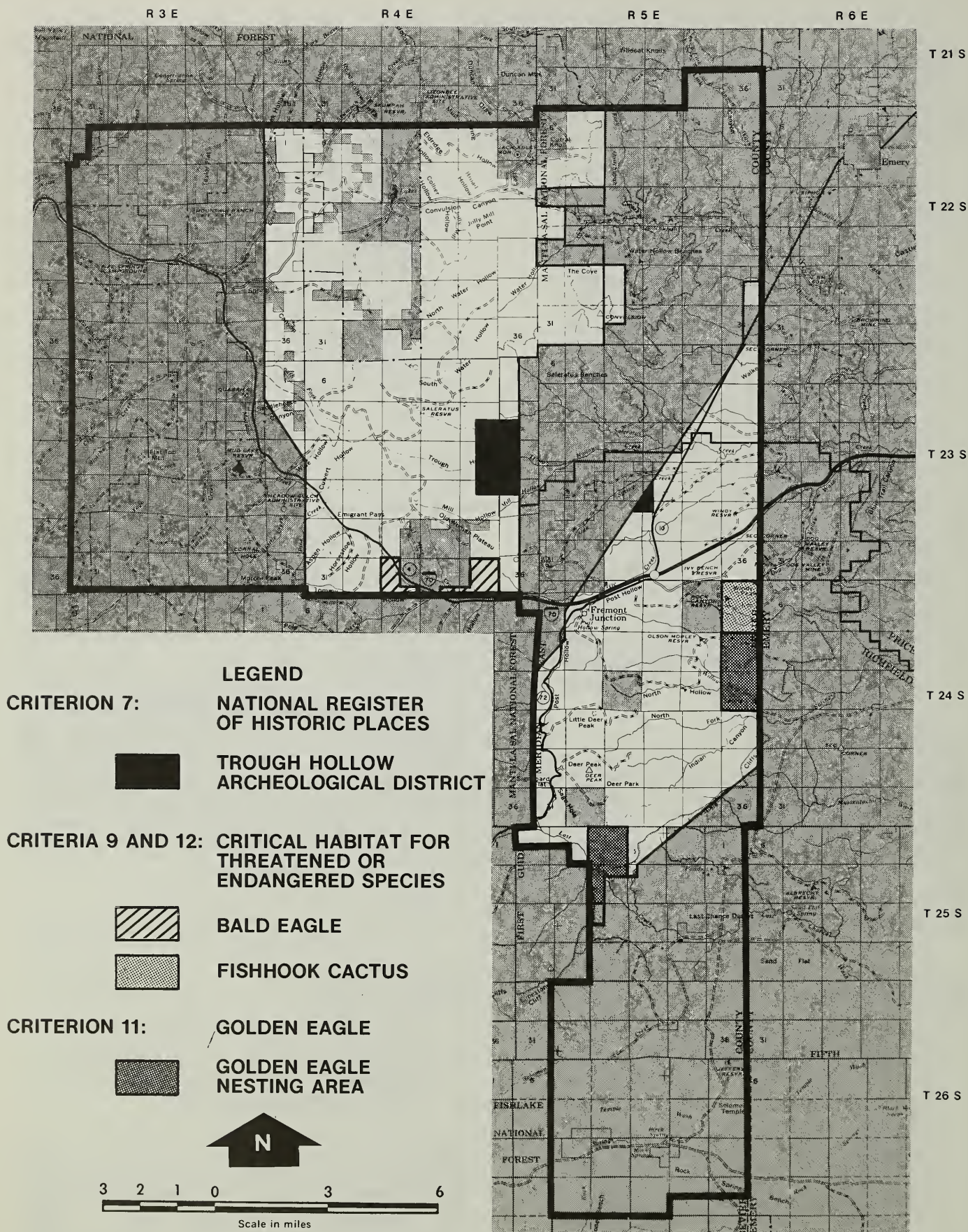
Exceptions:

The BLM and USFS have determined after consultation with the Division of State History that subsurface mining would not materially damage the proposed archaeological District provided that no surface disturbances, roads, dwellings, or subsidence are allowed within the District.

Criterion No. 8:

Federal lands designated as natural areas or National Natural Landmarks shall be considered unsuitable.

There are no Federal lands designated as natural areas or as National Natural Landmarks within the KRCRA boundaries (Forest Planning Unit, Unit Resource Analysis, 1976; Salina Land Use Plan, 1976).



MAP 3

Criterion No. 9:

Federally designated critical habitat for threatened or endangered plant and animal species, and habitat for Federal threatened or endangered species which is determined by the U.S. Fish and Wildlife Service (USFWS) and the surface management agency to be of essential value and where the presence of threatened or endangered species has been scientifically documented, shall be considered unsuitable.

There are no Federally designated critical habitats for threatened and endangered plant and animal species (Shields, 1980). However, the presence of the fishhook cactus (Sclerocactus wrightiae) and the bald eagle (Haliaeetus leucocephalus) have been scientifically documented within the planning unit (Dalton, 1980). After consultation with the USFWS, 1,929 acres of land associated with these species are considered to be of essential value (Map 3 identifies these lands). Therefore, these lands are considered unsuitable for future coal lease consideration.

Exception:

The USFWS has determined that subsurface mining would not jeopardize the continued existence of these species or their critical habitat (Shields, 1980). However, no surface disturbance would be permitted on these designated lands. Further stipulations would be developed at the time that a mining plan is filed.

Criterion No. 10:

Federal lands containing habitat determined to be critical or essential for plant or animal species listed by a state pursuant to state law as endangered or threatened shall be considered unsuitable.

The State of Utah, Division of Wildlife Resources (UDWR), does not maintain a threatened and endangered species list for plants and animals. The UDWR considers the Federal threatened and endangered list to be adequate (Coffeen, 1980).

Criterion No. 11:

A bald or golden eagle nest or site on Federal lands that is determined to be active and an appropriate buffer zone of land around the nest site shall be considered unsuitable. Consideration of availability of habitat for prey species and of terrain shall be included in the determination of buffer zones. Buffer zones shall be determined in consultation with the USFWS.

There are three active golden eagle (Aquila chrysaetos) nest sites within the KRCRA boundaries. The nest sites and about 2,560 acres of land around the sites are considered unsuitable for future coal lease consideration (Map 3 identifies these lands).

Exception:

The USFWS has determined that subsurface mining would not jeopardize the continued existence of this species (Shields, 1980). However, the following stipulations are applied to the issuance of a lease: surface disturbance would be conditioned to preclude disturbance of eagles during the

January to July nesting/breeding season (Smith et al., 1973); eagle nests may be moved or buffer zones may be increased so that active eagles nests would not be affected. In any case, no surface disturbance would be permitted along the limestone cliffs.

Criterion No. 12:

Bald and golden eagle roost and concentration areas on Federal lands used during migration and wintering shall be considered unsuitable.

There is one bald eagle roost and concentration area (906.7 acres) within the Wasatch KRCRA (Map 3). The USFWS considers any section of land associated with the concentration area to be essential (Shields, 1980). These lands are considered unsuitable for future coal lease consideration.

Exception:

The USFWS has determined that subsurface mining would not jeopardize the continued existence of this species (Shields, 1980). However, no surface disturbances, dwellings, occupancy, industrial fires, subsidence, portals, or roads would be permitted in the concentration area.

Criterion No. 13:

Federal lands containing a falcon (excluding kestrel) cliff nesting site with an active nest and a buffer zone of Federal land around the nest site shall be considered unsuitable. Consideration of availability of habitat for prey species and of terrain shall be included in the determination of buffer zones. Buffer zones shall be determined in consultation with the USFWS.

There are no known active falcon nest sites within the KRCRA boundaries. However, the prairie falcon (Falco mexicanus) has been observed in the area within the planning unit (Dalton, 1980).

Criterion No. 14:

Federal lands which are high priority habitat for migratory bird species of high Federal interest on a regional or national basis, as determined jointly by the surface management agency and the USFWS, shall be considered unsuitable.

Five migratory bird species of high Federal interest are found within the KRCRA boundaries. These species are: western bluebird (Sialia mexicana), flammulated owl (Otus flammulus), ferruginous hawk (Glaucidium brasilianum), golden eagle and bald eagle (Dalton, 1980; Ferguson, 1980). There is no known high priority habitat for the western bluebird, flammulated owl, or ferruginous hawk in the KRCRA boundaries. High priority habitat for the golden eagle and bald eagle has been discussed in Criteria 9, 11, and 12.

Criterion No. 15:

Federal lands which the surface management agency and the state jointly agree are fish and wildlife habitat for resident species of high interest to the state and which are essential for maintaining these priority wildlife species shall be considered unsuitable. Examples of such lands which serve a critical function for the species involved include:

(i) Active dancing and strutting grounds for sage grouse, sharp-tailed grouse, and prairie chicken;

(ii) Winter ranges most critical for deer, antelope, and elk; and

(iii) Migration corridors for elk.

A lease may be issued if, after consultation with the state, the surface management agency determines that all or certain stipulated methods of coal mining will not have a significant long-term impact on the species being protected.

The planning unit is inhabited by approximately 380 species of vertebrate wildlife during various seasons of the year. According to the UDWR, 84 percent of these species are protected by State law (Dalton, 1980). The BLM, USFS, and UDWR have agreed on essential habitat for these species. (Map 4 shows essential habitat areas.) The following lands have been identified as essential habitat due to their dependent use by these wildlife species for feeding, reproduction, and wintering.

- a. All perennial and ephemeral water sources, riparian habitat, and associated wetlands along with a 0.5 mile terrestrial habitat buffer zone on each side of the riparian habitat. This includes about 39,000 acres.
- b. All coniferous and aspen vegetation types. This includes 3,584 acres.
- c. All crucial-critical deer and elk winter range or habitat. This includes 28,781 acres.

- d. Cliff areas associated with raptor nests. This includes 4,440 acres.

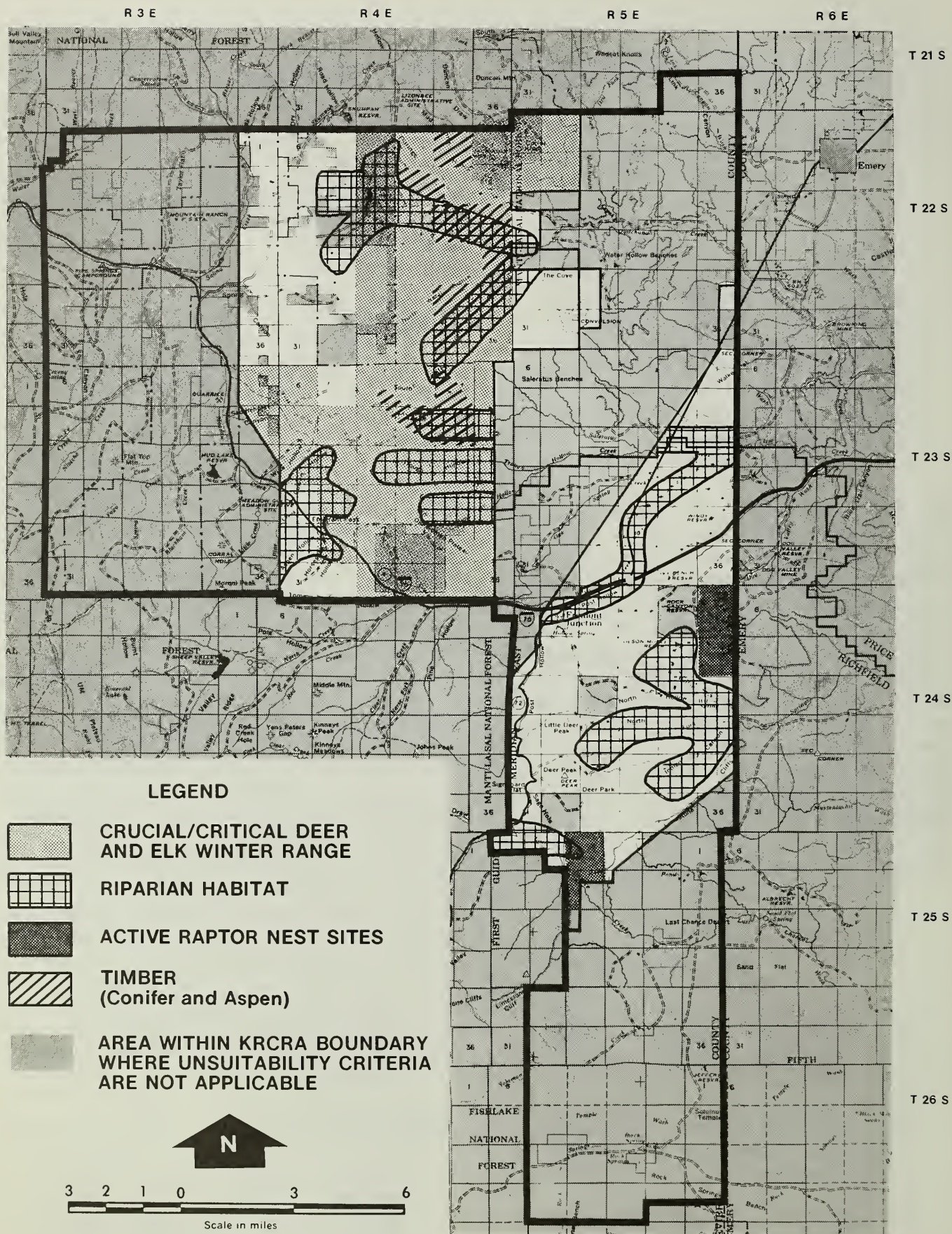
These areas are identified on Map 4. Under application of the unsuitability criteria, these lands are considered unsuitable for future coal lease consideration.

Exceptions:

The BLM and USFS have jointly determined after consultation with the UDWR that subsurface mining would not have a significant adverse long-term impact on the species being protected. Appropriate State and Federal permits along with reclamation plans would be required for any planned mining operations that could alter or destroy any riparian vegetation or discharge effluents into any perennial streams, reservoirs, lakes, or ponds. Prior to coal development, the developer would be required to provide a baseline intensive inventory of raptor breeding territories and identification of aerie sites within a 1-kilometer (0.6 mile) radius of any proposed portal facilities, load-out sites, or any other facility development that would result in a continual or significant disturbance during the raptor breeding season (February through June). Cliff areas associated with raptor nests are essential habitat and no surface disturbance would be allowed. In addition, no surface disturbance or occupancy would be allowed during elk and mule deer migration and use of the crucial-critical winter range (November 1 through May 15).

Criterion No. 16:

Federal lands in riverine, coastal, and special floodplains (100-year recurrence interval) shall be considered unsuitable unless after consultation with USGS, the surface



CRITERION 15: PRIORITY WILDLIFE SPECIES HABITAT

MAP 4

management agency determines that all or certain stipulated methods of coal mining can be undertaken without substantial threat of loss to people or property, and to the natural and beneficial values of the floodplain on the lease tract and downstream.

Lands in special floodplains were identified by using Housing and Urban Development Flood Hazard Boundary maps and from aerial photography. (Map 5 shows special floodplain areas.) Approximately 480 acres on Ivie Creek are located on 100-year floodplains. Accordingly, these lands are unsuitable for future coal lease consideration.

Exceptions:

The BLM and USFS have determined that subsurface mining may be undertaken without substantial threat of loss to people or property, and to the natural and beneficial values of the floodplain on the lease tract and downstream. However, no surface facilities or occupancy would be allowed within the 480 acres identified.

Criterion No. 17:

Federal lands which have been committed by the surface management agency to use as municipal watersheds shall be considered unsuitable.

There are no Federal lands which have been committed by the BLM or USFS to use as municipal watersheds.

Criterion No. 18:

Federal lands with National Resource Waters, as identified by states in their water quality management plans, and

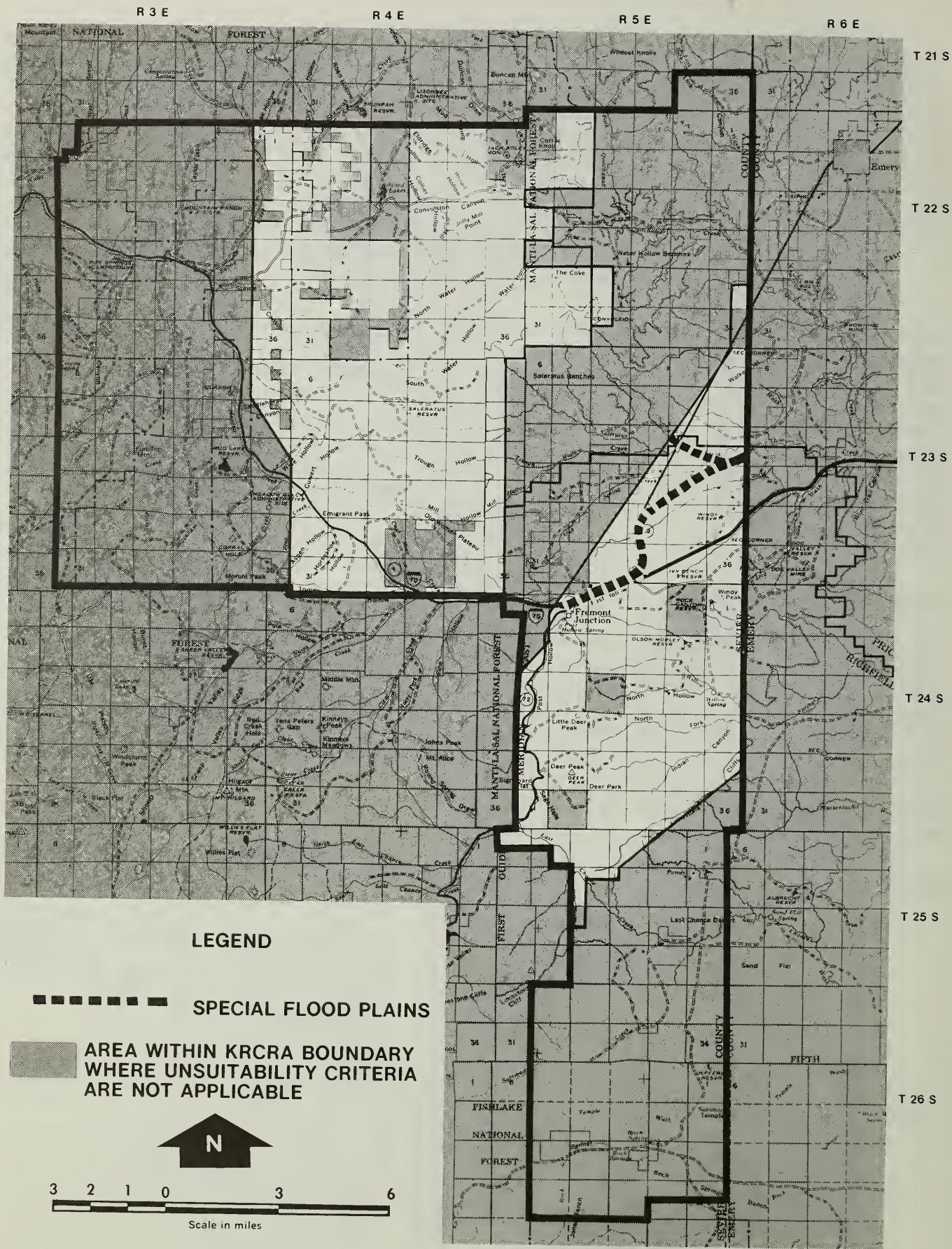
a buffer zone of Federal lands 1/4 mile from the outer edge of the far banks of the water, shall be unsuitable.

Utah Division of Water Resources has not identified any Federal lands with National Resource Waters (Lawrence, 1980).

Criterion No. 19:

Federal lands identified by the surface management agency, in consultation with the state in which they are located, as alluvial valley floors according to the definition in § 3400.0-5(a) of this title, the standard in 30 CFR Part 822, the final alluvial valley floor guidelines of the Office of Surface Mining Reclamation and Enforcement when published and approved state programs under the Surface Mining Control and Reclamation Act of 1977, where mining would interrupt, discontinue, or preclude farming, shall be considered unsuitable. Additionally, when mining Federal land outside an alluvial valley floor would materially damage the quantity or quality of water in surface of underground water systems that would supply alluvial valley floors, the land shall be considered unsuitable.

No alluvial valley floors are located within the planning unit's KRCRAs. However, two distinct alluvial valley floors outside the planning unit received water from the KRCRAs. After many years of mining experience in the same coal beds outside the planning unit, no evidence can be found that indicates any change in the quantity and quality of surface or underground



water systems that supply water to these alluvial valley floors. However, some concern has been voiced that leachate from coal stored or spilled at load-out facilities could affect water quality in alluvial valley floors outside the planning unit (Daniels, 1980). Exact impacts to the quantity or quality of water in surface or underground water systems in adjacent alluvial valley floors cannot be determined without additional data. In some instances, final assessment of impacts may not be made until mining has commenced.

Criterion No. 20:

Federal lands in a state to which is applicable a criterion (i) proposed by that state, and (ii) adopted by rulemaking by the Secretary, shall be considered unsuitable.

The State of Utah has not proposed or adopted any other criteria.

MULTIPLE-USE RECOMMENDATION

All Federal coal areas within the Wasatch Plateau and Emery KRCRA are determined to be "acceptable for future coal lease consideration." However, some of these areas will require protective stipulations. The acceptable areas total 73,952.37 acres with an estimated 13,350 tons per acre of recoverable coal reserves.

Rationale

In order to meet the President's announced energy plan of reducing foreign oil imports, the nation must increase the 1985 projected domestic coal production of 400 million tons per year to 600 million tons per year. This production could be filled from several sources or combination of sources including increased production

of existing mines, authorization of mine plans on existing leases, production from preference right lease applications, and new leases.

On June 1, 1979, Secretary of the Interior Andrus decided that there was a need to promptly establish a Federal Coal Management program. One portion of the Secretary's decision dealt with the Uinta-Southwestern Utah Coal Region which includes the Forest Planning Unit. The decision is a tentative leasing target of 109 million tons with a July 1981 sale date. The target represents the Department of Energy's medium 1990 production level. With this decision, the surface management agencies of the Forest Planning Unit must be in a position to offer an adequate amount of coal to fill that need.

The coal in the Wasatch Plateau KRCRA represents high quality coal with the following average characteristics: moisture, 6.1 percent; volatile matter, 42 percent; ash, 6.5 percent; sulphur, 0.6 percent; fixed carbon, 45.4 percent; and 12,200 British thermal units (Btu) per pound.

Coal from the Emery KRCRA is of equally high quality with the following average characteristics: moisture, 8.5 percent; volatile matter, 36.2 percent; ash, 9.3 percent; sulphur, 0.6 percent; fixed carbon, 43.6 percent; and 11,700 Btu per pound.

OTHER RESOURCE VALUES

Recreation:

There are approximately 7,744 acres along Interstate 70 in the KRCRA that have been designated as VRM Class II. These VRM Class II areas contain significant scenic resources with high visual sensitivity. Subsurface mining should not adversely affect the visual

quality of the scenic resource provided that the following stipulations are attached: no surface disturbance, surface occupancy, industrial fires or subsidence would be allowed. (Map 6 shows those areas affected by multiple use trade-offs.)

Sensitive Species:

Two plant species, Gaillardia flava and Townsendia aprica, have been recommended to be designated as threatened or endangered species and are currently considered sensitive. Existing or potential threats to these species include potential industrial development, off-road vehicle and recreational use of the habitat (Welsh and Thorne, 1979). There are approximately 1,499 acres of habitat for these species within the Emery KRCRA. Sub-surface mining would not jeopardize the continued existence of these species provided that the following stipulations are attached: prior to the filing of a mining plan the habitat areas would be surveyed for these species; a buffer zone would be established in consultation with the USFWS to protect these species and habitat sites; no surface disturbances, surface occupancy, industrial fires, or subsidence would be allowed.

The Summary Map (map 7) identifies those areas acceptable for future coal lease consideration.

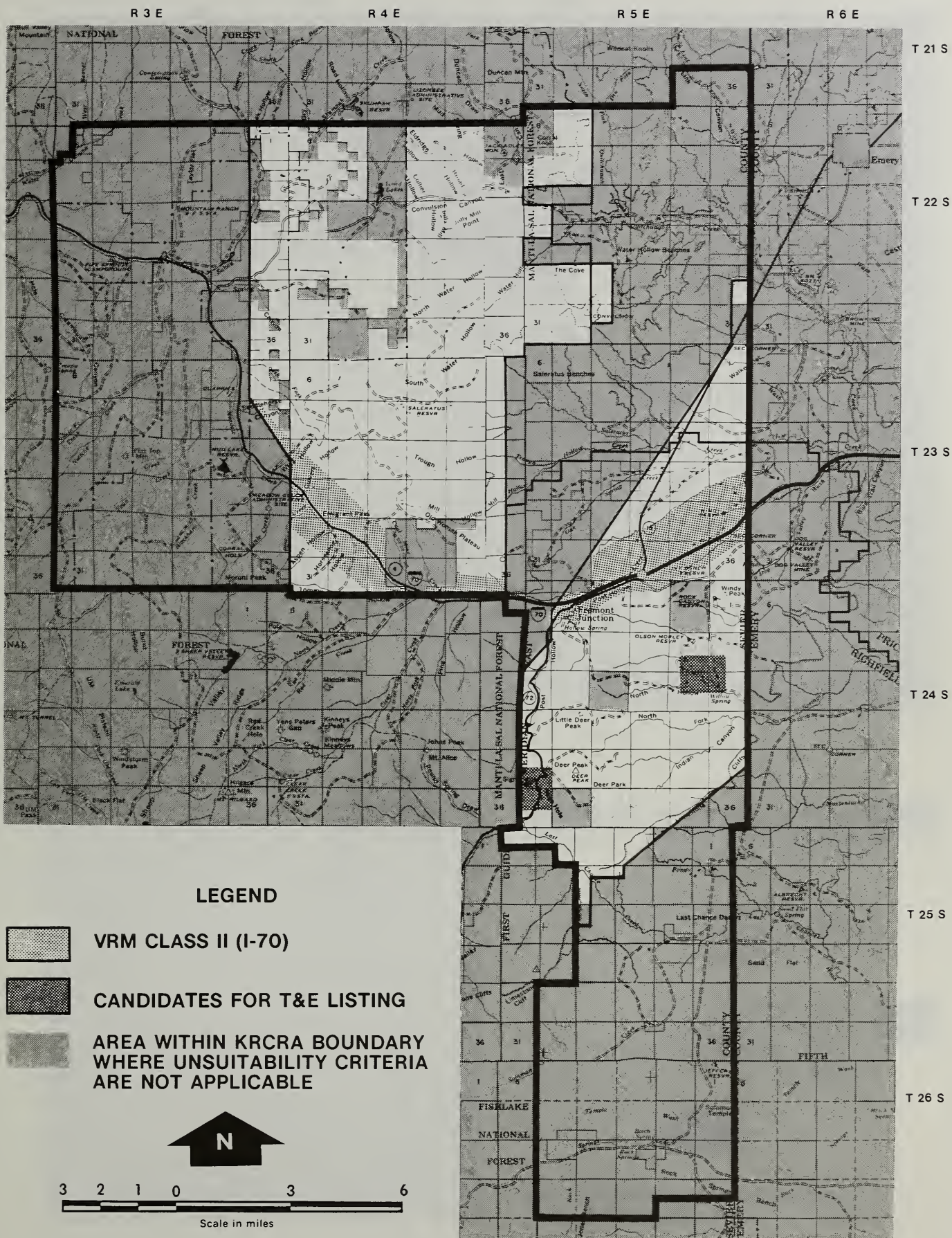
IMPACT OF UNSUITABILITY DESIGNATIONS ON THE SUPPLY OF COAL AND THE ECONOMY OF SEVIER AND EMERY COUNTIES

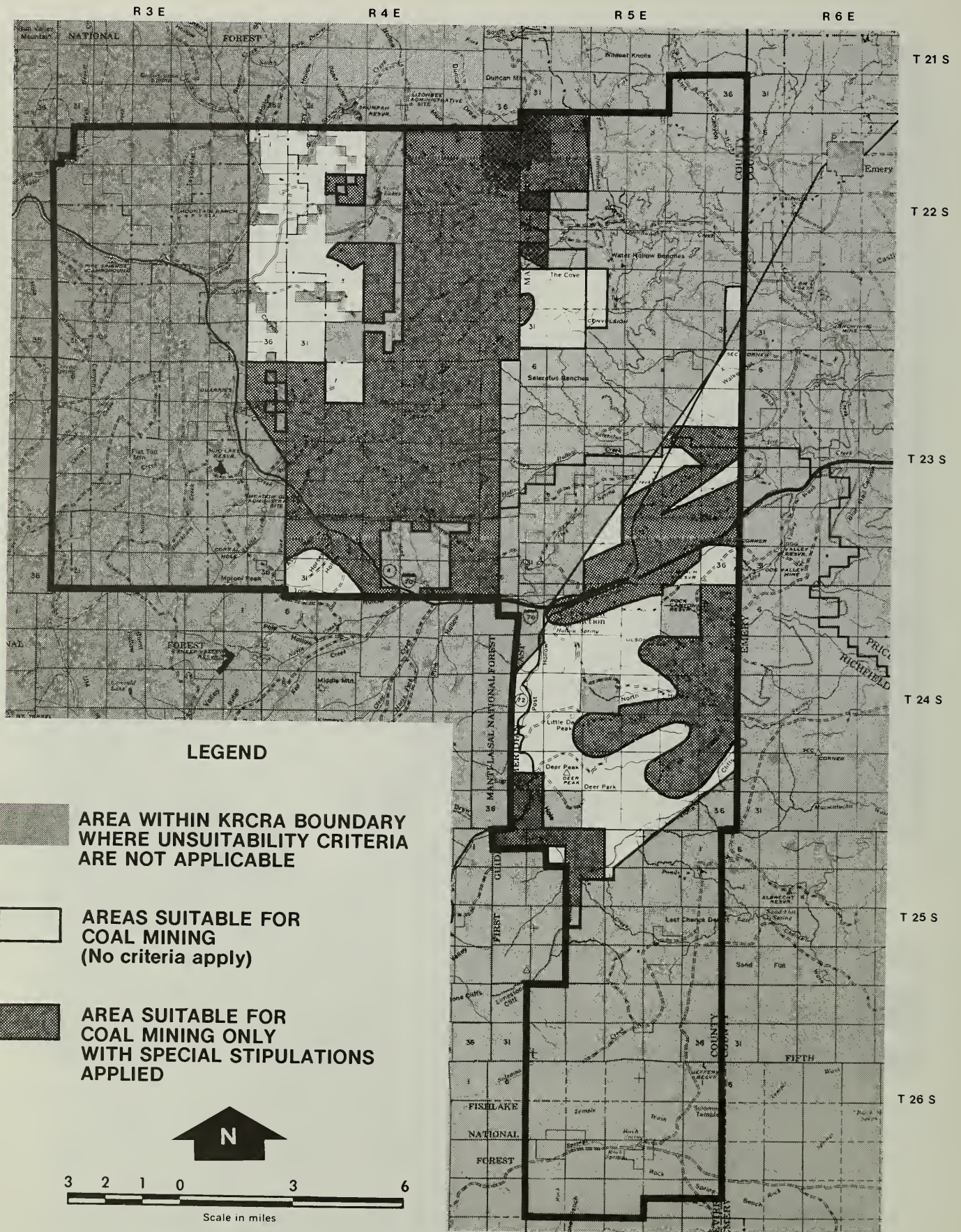
The economy of Sevier County has not had a strong mining base. Mining accounts for 4.7 percent of the Sevier County working population (University of Utah, 1979a). However, the mining industry has experienced some growth. In 1965, there were 35 mining employees in Sevier County. By 1975 there

were 145 mining employees and a year later, in 1976, there were 209 workers (University of Utah, 1979b). In contrast, the economy of Emery County has traditionally had a strong mining base. Mining accounts for 29 percent of the Emery County working population (Utah Employment Security, 1978) and 47.6 percent of the total earnings within the county (U.S. Department of Commerce, 1979). The mining industry experienced rapid growth in Emery County during the 1970s. For example, only 364 jobs were tied to the mining industry in 1970, while in 1978 there were 1,596 such employees (Utah Employment Security, 1978; U.S. Department of Commerce, 1979). In Emery County, coal represents 93 percent of the mining industry (Newman, 1979). The demand for coal is expected to increase in the future. This conclusion is supported by recent Department of Energy projected coal production estimates for the Uinta-Southwestern Utah Coal Region. In 1976, total production in this region was 10.1 million tons. The Department of Energy has estimated that coal production from this region could vary from 13.9 to 14.5 million tons by 1985, and from 16.9 to 20.6 million tons in 1990. To reach these production levels, coal could come from existing leases, preference right lease applications, and new leases.

On June 1, 1979, Secretary of the Interior Andrus determined that an additional 109 million tons of coal should be offered to help meet the identified production targets.

None of the coal acreage in the Forest Planning Unit's KRCRAs was determined to be unsuitable. Because of this, the unsuitability designations are not anticipated to result in an adverse impact on either the supply of coal or the economy of Sevier and Emery Counties.





PUBLIC PARTICIPATION

The BLM and USFS published a joint notice in the Federal Register on December 31, 1979, stating that the unsuitability criteria would be applied to the coal areas in updating the planning documents. A followup article on the updates appeared in the Richfield Reaper and was announced over KSVC radio station in Richfield. A public meeting was held in Richfield, Utah on May 15, 1980 to discuss preliminary findings and solicit public comment on the proposals.

Many written, personal, and telephone contacts were made with various government agencies, coal companies, and other individuals as required (A-95). These individual contacts were made by the various resource personnel involved in the coal unsuitability study. However, few letters or telephone contacts have been received from the general public. Some who have responded were concerned that the study would "lock up millions of acres of coal." Others expressed concern over the close distance of the coal reserves to Capitol Reef National Park. These individuals felt that air quality standards may deteriorate in the park. Public concern was also expressed on the impact of mining along limestone cliff areas which serve as raptor nest sites.

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